## **CoCoRaHS**

**July 2008** 

This month we'll take a look at an article from NOAA's Earth System Monitor newsletter that highlights the importance of water resources and our economy. Thanks to your participation in CoCoRaHS we are able to better monitor precipitation in Tennessee. We are understanding the variability, especially over short distances, to a greater degree than ever. This article really hits home as we remember the drought from last year, look at decreasing rainfall this past month and face the possibility of more dry weather for the remainder of the summer.

Thanks to everyone for the Intense Precipitation reports we've received lately. These reports help the weather service make the decision to issue warnings or help to verify those warnings that have been issued. These reports alarm directly on weather service operational computers.

We've tried something new this month too, putting together a monthly rainfall map that can be viewed in <u>Google Earth</u> or any GIS application you may have. There are actually 2 different maps, one for state-wide CoCoRaHS totals and the other for COOP sites in Middle Tennessee. The map of CoCoRaHS sites used those sites that had at least 28 days reporting for June (~225).

You can download each map by clicking on the link below:

CoCoRaHS June Rainfall

**COOP June Rainfall** 

Across the country CoCoRaHS is now active in 34 states. Thanks again for all you're doing to make CoCoRaHS a vital and important part of tracking the weather here in Tennessee.

Your Tennessee State Coordinators Joanne, Craig, Zwemer, & Ralph

## **EARTH SYSTEM MONITOR May 2008**

## Water Availability: The Next Oil Crisis?

Gary Carter, NOAA Hydrology Program Manager and Director Office of Hydrologic Development, and Dr. John Ingram, NOAA Hydrology Program Coordinator and Lead Hydrologist, Office of Hydrologic Development

In January 2008, the United Nations Secretary General projected, "Half the nations of the world will face freshwater stress or shortages by 2025." The newly crafted water resources policy of the American Meteorological Society states, "The provision of adequate fresh-water resources for humans and ecosystems will be one of the most critical and potentially contentious issues facing society and

governments at all levels during the 21st century." By 2030, the Energy Information Administration expects U.S. electricity demand to grow by 50 percent, placing an additional burden on freshwater supplies.

Because water availability and utility are linked to population growth, development, and changing weather patterns, America is facing a water crisis. Locations where water was once plentiful are experiencing competing and conflicting demands on finite fresh water quantities for human health, ecosystem integrity, agriculture, aquaculture, hydropower generation, river commerce, recreation, tourism, and the economic vitality of communities and the Nation. Decision makers must now balance the allocation of fresh water among these often-competing and conflicting demands. Increasing financial and regulatory pressures will require water managers to seek more complete (multiple-use) ways to:

- Optimize water availability allocations for growing communities
- Manage fish and wildlife habitats
- Support productive agriculture/aquaculture
- Expand industry and river commerce
- Maximize hydro-power generation
- Mitigate the impacts of floods and droughts
- Build community resilience to weather event impacts and changing precipitation patterns
- Sustain water quality

The National Oceanic and Atmospheric Administration (NOAA) has the long-standing mandates and unique Federal role (based upon public law and/or executive orders, such as the National Weather Service Organic Act and the NOAA Inland Flood Forecasting and Warning Act) to deliver water forecasts and warnings in support of safety, river commerce, water allocation, power production, and recreation for the public and private sectors. NOAA scientific products and services for the Great Lakes provide water managers and policy makers with critical information to make informed, cost-effective decisions. Other NOAA operational forecast systems, such as those for the Chesapeake Bay and Galveston Bay, support the maritime community with improved short-term predictions of water levels and currents. Hence, NOAA has the service delivery system, expertise, and legislative mandates to provide critical information for the protection and management of our Nation's water resources. And, NOAA offices have developed extensive partnerships with the Federal, state, and local water agencies that measure, monitor, and manage water. By integrating our extensive research, observational assets (this includes CoCoRaHS), modeling capabilities, and forecasting infrastructure, a new generation of water services can be designed, tested, and transitioned to operations. These integrated water services will support the widespread use of risk-based decision tools to proactively manage and limit devastating societal impacts to communities and the ecosystem. NOAA's integrated water services will provide well-coordinated information, resulting in more

reliable information for decision makers to make critical decisions. NOAA's Integrated Water Services will enable decision makers to optimize decisions for often competing and conflicting fresh water demands.